

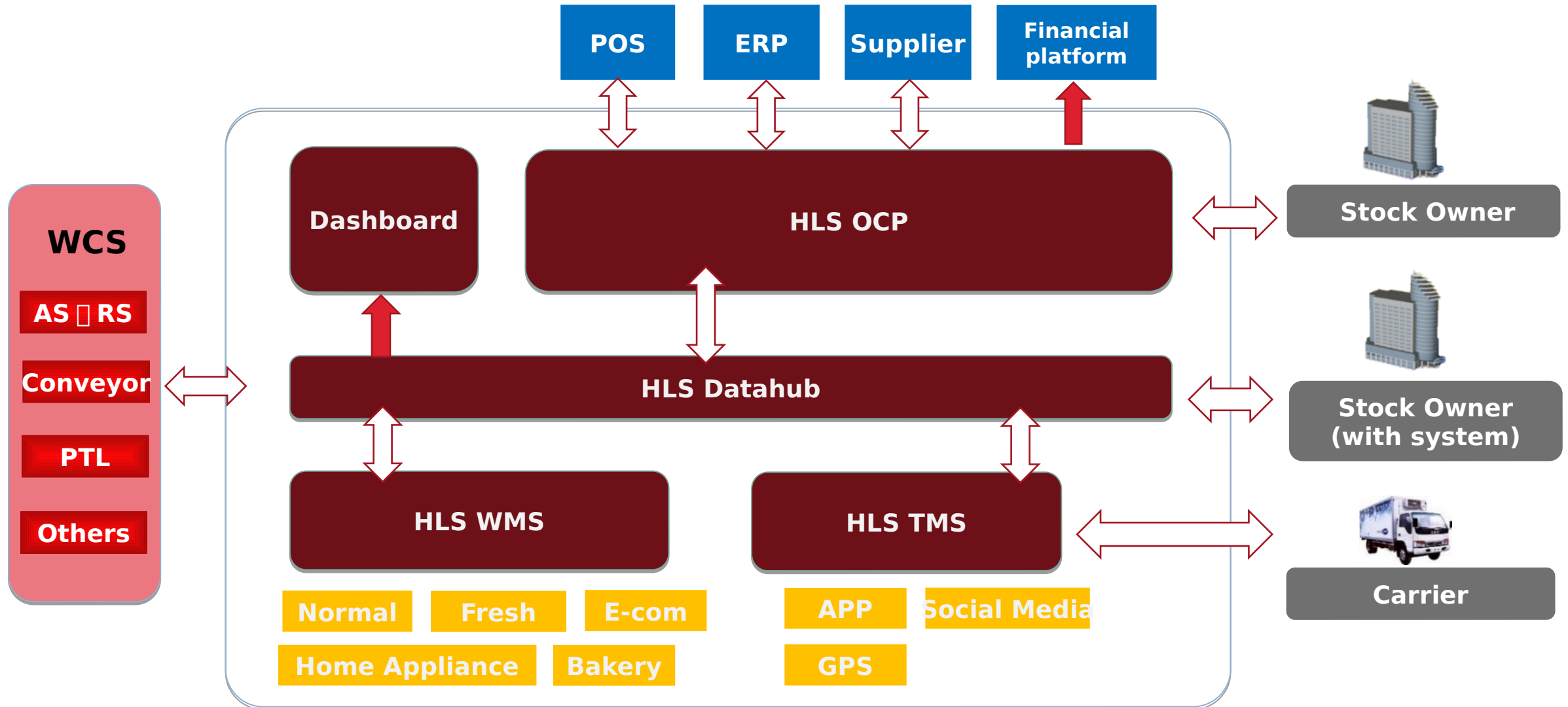
HONEYWELL WMS

SOLUTION – RETAIL GROCERY

Honeywell

HLS RETAIL SOLUTION

Honeywell | Logistics Solutions



CUSTOMERS: RETAIL GROCERY



CASE STUDIES



Meiyijia Convenience Stores

- Meiyijia branded convenience store is owned by Dongguan Sugar & Liquor Group. Since 1997, they have stores across 41 cities in 5 provinces Guangdong, Fujian, Hunan, Hubei and Jiangsi. As of Jan 2017, they have 9300 stores.
- They are the leading retailer, and China's largest convenience store chain
- They have won China Retail Industry Top Ten Franchise Brands Award, China Convenience Store Award, and many other awards. Meiyijia is China's leading brand in the Franchising business

Express Logistics

- Dongguan Time Express Logistics Company is a subsidiary of the Dongguan Sugar & Liquor Group. They are a 3PL enterprise that integrate logistics planning, management, services technologies for their customers.
- They target convenience stores & appliance deliveries. They are Meiyijia's logistics service provider and is responsible for fulfilling Meiyijia's storage & delivery requirements.



PROCESS IMPROVEMENT

Better store fulfilment, High efficiency and growth support

- **Dock Management** – manage vendor delivery, balance dock resources for inbound process
- **Lot Attribute Control** – FEFO control and transparency in inventory
- **Wave plan optimization** – by store per day, by route, by truck capacity, mix wave(case pick +loose)
- **Replenishment** – ensure sufficient picking face and efficient task dispatching
- **Picking** – different pick method to support regular goods, marketing materials, loose items, chilled
- **Sorting** – sort by store, sort by route, sort by order
- **Packing** – packing validation and report printing
- **Cross-dock** – cross-dock to enhance warehouse capability

APPOINTMENT AND DOCK MANAGEMENT

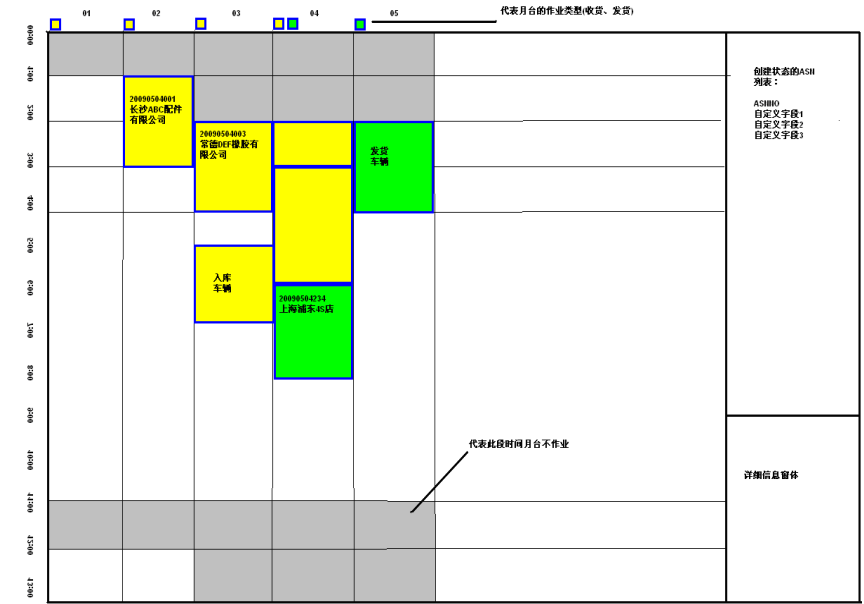
Appointment

- Supplier internet or phone appointment for delivery
- Vehicle entry control & management
- Receiving Dock, workforce, equipment & container preparation

WMS Welcome! 供应商预约									
系统管理员, 欢迎您!									
自定义业务功能									
退货管理									
预约管理									
供应商预约									
园区管理									
行业插件									
业务系统管理									
*供应商代码 订单状态 查询成功!									
查询 清除 more									
新增预约 查看预约 其它									
参考订单号	订单号	订单状态	订单类型	送货日期	失效日期	供应商代码	供应商	预约人	备注
8000000002	0000003781	创建订单	设备	2012-03-24 23:59:00	2012-03-24 23:59:00	1000596	EC@东莞市春和堂食品有限公		新品定货--
0049036556	0000003778	创建订单	拆零定单	2016-04-29 16:59:00	2016-05-31 16:59:00	1000596	EC@东莞市春和堂食品有限公		@由定货池生成-
0049036538	0000003761	ASN关联	拆零定单	2016-04-21 17:06:00	2016-05-20 17:05:00	1000046	EC@东莞市天纬百货有限公司	WPSADMIN	试销;@由定货池生
0049036537	0000003760	创建订单	拆零定单	2016-04-29 11:25:00	2016-04-30 11:25:00	1000046	EC@东莞市天纬百货有限公司	WPSADMIN	@由定货池生成--
0049036483	0000003722	创建订单	拆零定单	2016-04-14 23:59:59	2016-04-14 23:59:59	1000187	EC@东莞市雅信贸易有限公司		@0409期套餐订货
0049035931	0000003363	创建订单	拆零定单	2016-04-12 23:59:59	2016-04-12 23:59:59	1000187	EC@东莞市雅信贸易有限公司		@0409期周末超低
0049035929	0000003361	创建订单	拆零定单	2016-04-12 23:59:59	2016-04-12 23:59:59	1000046	EC@东莞市天纬百货有限公司		@0409期周末超低
0049035423	0000003161	创建订单	拆零定单	2016-04-12 23:59:59	2016-04-12 23:59:59	1000187	EC@东莞市雅信贸易有限公司		由定货池生成。合
0049035417	0000003157	创建订单	拆零定单	2016-04-12 23:59:59	2016-04-12 23:59:59	1000046	EC@东莞市天纬百货有限公司		试销;由定货池生
当前数 19 总数 19 每页 500 首页 上页 1/1 下页 末页 移至 1									
行号	产品	中文描述	订单数量	订单箱数	预约数量	预约箱数	规格	单位	
1	98042302	N美即面膜陈列架	600	600	600	600+0	1*1	个	

Dock management

- Through colored blocks, visually display dock send/receive time share & vehicle arrangements
- Display operation hours, dock number, usage



LOT ATTRIBUTE

LOTATT Label	LOTATT Label...	Rf Show	LOTATT Flag	Lot Type	LOTATT Value
Production Date	MAN.DATE	☒	Disable	Date	
Expiration Date	EXP.DATE	☒	Disable	Date	
Receiving Date	RCV.DATE	☒	Mandatory	Date	
LOTATT04	LOTATT04	☒	Disable	Char	
Cust. SKU	Cust. SKU	☒	Optional	Char	
PO#	LOTATT06	☒	Optional	Char	
Batch Lot	LOTATT07	☒	Optional	Char	
Damage	Damage	☒	Optional	Char	Good/Damage
LOTATT09	LOTATT09	☒	Disable	Char	

Pack ID	Lot ID	Default Receiving UOM	Defau
1/20/480	MF1 Standard Lot Infor	EA	EA

- Inventory Lot Information
- Full cycle management on:
 - Receiving Date
 - Manufacturing Date
 - Expiry Date
 - Vendor
 - Inventory status
- Near expiry notification
- Inbound / outbound checking
- Picking / replenishment rotation

PACKAGE

Package X

Main Info Additional User-defined Other

Customer ID MF1 Pack ID 1/20/480 Pack Descr PKG-1/20/480

	QTY	UOM Descr	Pack Material	Cartonize Flag
EA	1	EA	...	☒
IP	0	IP	...	☐
CS	20	CS	...	☒
PL	480	PL	...	☒
OT	0	OT	...	☐

SKU X

Form Details Picking Location Multi-Warehouse

Main Info Control SerialNO Manage

Pack ID 1/20/480 Lot ID MF1 Stand? QC Point QC Time NO Need for QC

- SKU package control:
 - Each
 - Innerpack
 - Case
 - Pallet
- Package information can be tracked during the whole process within the warehouse
- Support to process by different

Form Details Picking Location Multi-Warehouse Multi-Package X

+ Add Copy Delete Print Operation Export Edit ...

Customer ID	SKU	Pack ID	UDF01	UDF0
☐ MF1	MF1-SKU-002	1/20/240		
☐ MF1	MF1-SKU-002	1/20/480		

RECEIVING

Standard Receiving

[Ⓢ]SKU
MF1-SKU-018

SKUDescr
MF1-SKU-018-DESCR1

PackID	TiHi	Expected QTY	Received QTY
1/10/200		100	0

Rcv LOC Putawaylocation Holdcode
INB-ST1-010

UOM	UOM	Rcvd QTY	QTY
CS	CS		10

Confirm Cancel

Standard Receiving

Rej QTY Reason code
0

Trace ID TO
T201900018

Confirm Cancel

HoneywellWMS

Receiving Order Summary



Customer : Manufacture 001
Warehouse ID : Manufacturing Warehouse

Order Type : Purchase Receiving
Printed Date : 13/04/2019 21:21:31

Order No. RO000013

	SKU Description	Barcode	Specification	Expected Quantity	Received Quantity	Remark
1	MF1-SKU-018 MF1-SKU-018-Descr2		PKG-1/10/200	10	0	

- Conjunction with dock management
- RF and barcode receiving with different UOM, accurate and efficient
- Auto calculating expiry date and control
- Single-item and mixed item palletizing, auto label printing to specific printer (wi-fi and Bluetooth)
- Trace ID will be tracked and managed during the whole life cycle within the warehouse
- Inventory status and reason code

DASHBOARD - APPOINTMENT AND RECEIVING

Honeywell IWMs		P0 Delivery & Receiving Status						2019-04-13 23:59:50
P0 No	SKU	Description	Status	Receive Time	Order	Rcvd	Open	Pta 1/2
000001	MF1-SKU-013	MF1-SKU-013-Descr1	Partial Received	2019-04-09	100	50	50	50
P0000002	MF1-SKU-001	MF1-SKU-001-Descr1	Not Delivered		72	0	72	0
P0000002	MF1-SKU-002	MF1-SKU-002-Descr1	Not Delivered		480	0	480	0
P0000004	MF1-SKU-018	MF1-SKU-018-Descr1	Partial Received	2019-04-08	240	80	160	40
P0000004	MF1-SKU-020	MF1-SKU-020-Descr1	Not Delivered		600	0	600	0
P0000005	MF1-SKU-019	MF1-SKU-019-Descr1	Fully Received	2019-04-10	90	90	0	90
P0000005	MF1-SKU-017	MF1-SKU-017-Descr1	Partial Received	2019-04-10	60	58	2	58
P0000006	MF1-SKU-013	MF1-SKU-013-Descr1	Not Delivered		400	0	400	0
P0000006	MF1-SKU-016	MF1-SKU-016-Descr1	Not Delivered		480	0	480	0
P0000008	MF1-SKU-018	MF1-SKU-018-Descr1	Fully Received	2019-04-10	50	50	0	0
P0000010	MF1-SKU-012	MF1-SKU-012-Descr1	Partial Received	2019-04-13	360	180	180	180
P0000010	MF1-SKU-015	MF1-SKU-015-Descr1	Partial Received	2019-04-13	1000	800	200	500
				Total	6,372	3,748	2,624	918

RADIAL PUTAWAY



- Location Coordinate (X, Y, Z) setting
- Aisle consideration
- Nearest storage location finding
- Zone configuration for each SKU
- One-step and 2-steps Putaway strategy
- Task inter-leaving

WAVE PLANNING

- Combine orders with similar operational properties or logical relationship into a lot for picking
- The logical combination can be triggered by a timer or pre-set conditions
- For different business process, WMS system will provide various wave-pick optimization strategy

Configurable interface

Multiple combinations of wave-pick strategy

Can turn on/off based on actual conditions

Timer controlled wave pick intervals

✓ Configuration Options

1. Carrier
2. Delivery Method
3. Sales Order type
4. Sales Order priority
5. Sales Order status
6. Route
7. Number of fixed consignees
8. Upper & Lower limit of Sales Order volume
9. Weight, Volume Limit
10. Sort / No Sort
11. Individual Item order

✓ Dock consideration

✓ Balancing store needs

Wave Plan Rule

Wave Rule

WR_MF1_SINGLE_SKU

Wave Descr

MF1 Single SKU Wave Rule

Customer ID

MF1

Carrier ID

...

Order Type

Transfer Order

Single Match

Single Item

SKU Combination

NO Combination

Carrier ID

...

SO Status

Allocated

Add Sow TO

No PTL tasks

Last Wave Time

...

Priority

3

Transportation

...

Assorting Type

...

Wave Count

...

Warehouse ID

MFG

Allocation Rule

...

Route

...

Optimize Type

...

Unit Count

...

☐ AuDispatch TO

☐ Pick Light TO

☐ Link Carton

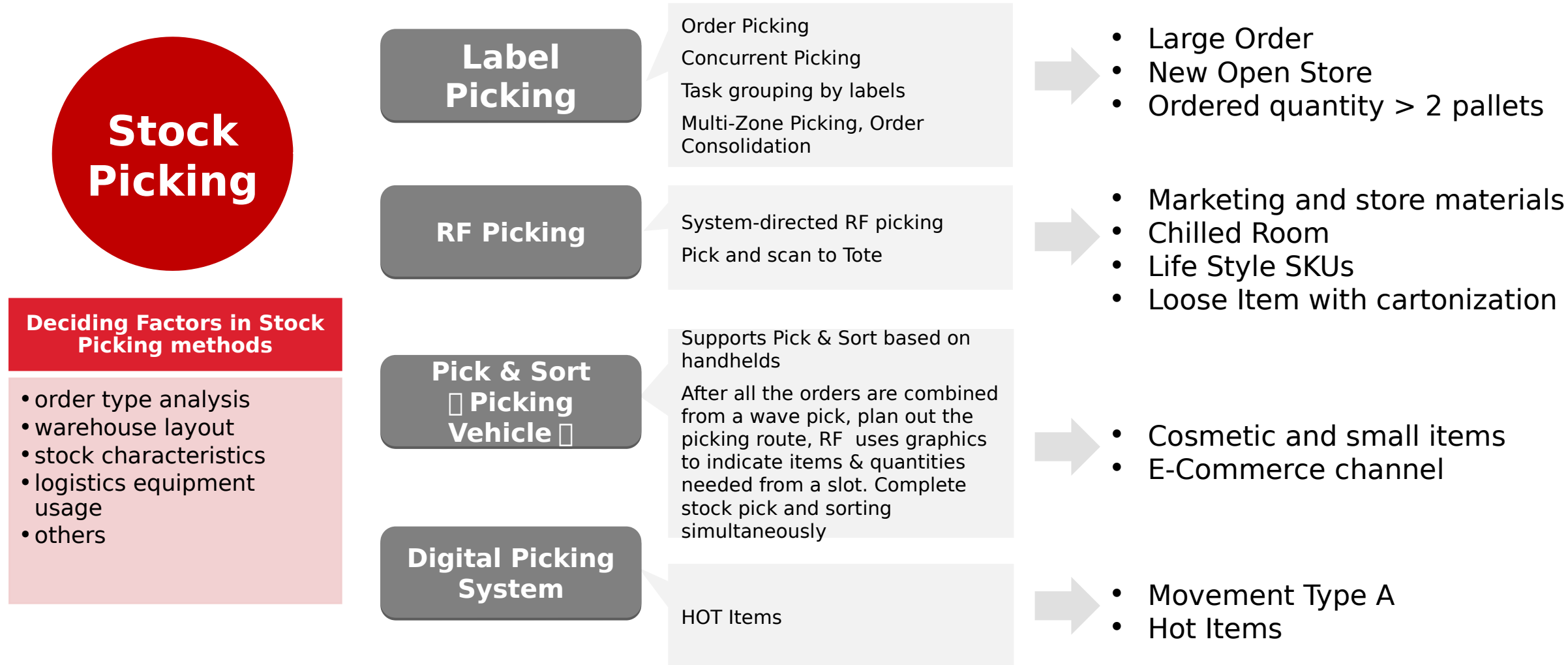
WAVE PLANNING

Total ordered: 422 cases, 300 cases in stock

Store	Ordered (CS)	Store Priority	Strategy 1 By Priority	Strategy 2 By %	Strategy 3 1 case first then by %	
Store 1	10	3	10	7	1 7	8
Store 2	10	2	10	7	1 7	8
Store 3	30	1	30	20	1 21	22
Store 4	200	5	170	142	1 13 9	140
Store 5	2	6	0	1	1 1	2
Store 6	90	7	0	65	1 63	64
Store 7	80	4	80	58	1 55	56

PICKING OPTIMIZATION

EFFICIENCY IS KEY, HONEYWELL WMS SUPPORTS VARIOUS PICKING MODELS



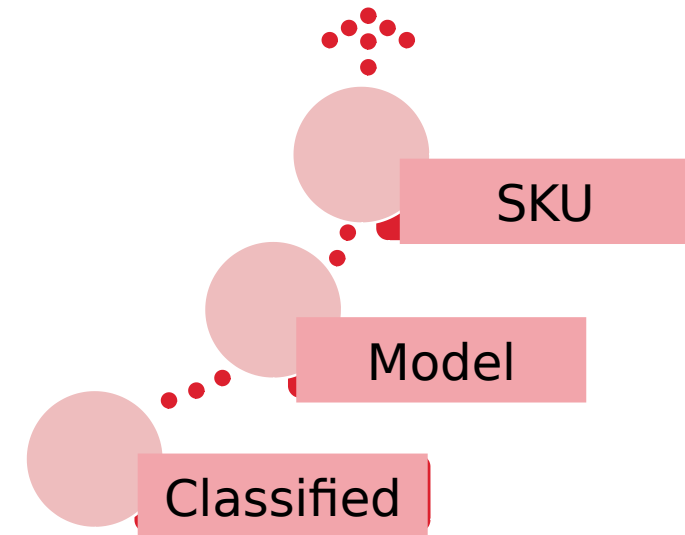
IMPROVE RETURN EFFICIENCY THROUGH MULTIPLE LEVEL SORTING



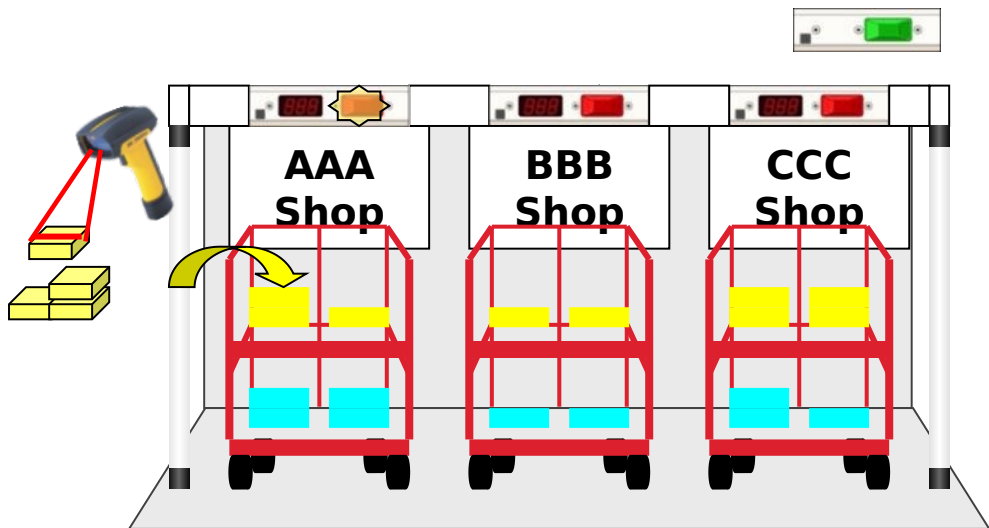
Sorting Wall

SPS
Messy Return Process

New Product Pressure
Huge eCommerce order



APPROACH - CHILLED ROOM AND STORE SORTING



SPS
Messy Return Process
New product pressure
Huge eCommerce order



Honeywell WMS

Graphic Put Wall

WaveNO: WO000003 Put Wall Type: MFG_PW040A Descr: Put to Wall Demo A

SKU	Total Qty	Put to Qty	Balance Qty	Carton Box No	SKU Descr
☐ MF1-SKU-011	7	2	5		MF1-SKU-011-Descr1
☐ MF1-SKU-012	14	1	13		MF1-SKU-012-Descr1
☐ MF1-SKU-013	6	2	4		MF1-SKU-013-Descr1
☐ MF1-SKU-015	7	5	2		MF1-SKU-015-Descr1

Reset

2

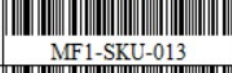
Total SKU (Wave): 10 Total Qty (Wave): 80 Scanned Qty (Wave): 18 Scanned Qty (Order): 2

SKU: MF1-SKU-013-Descr1

Full Case Pack Label Options

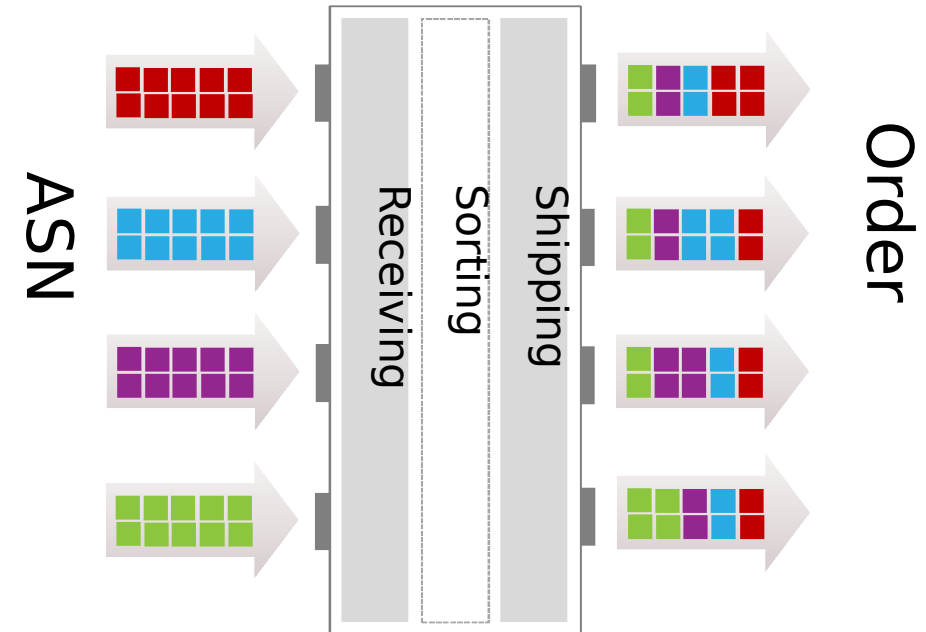
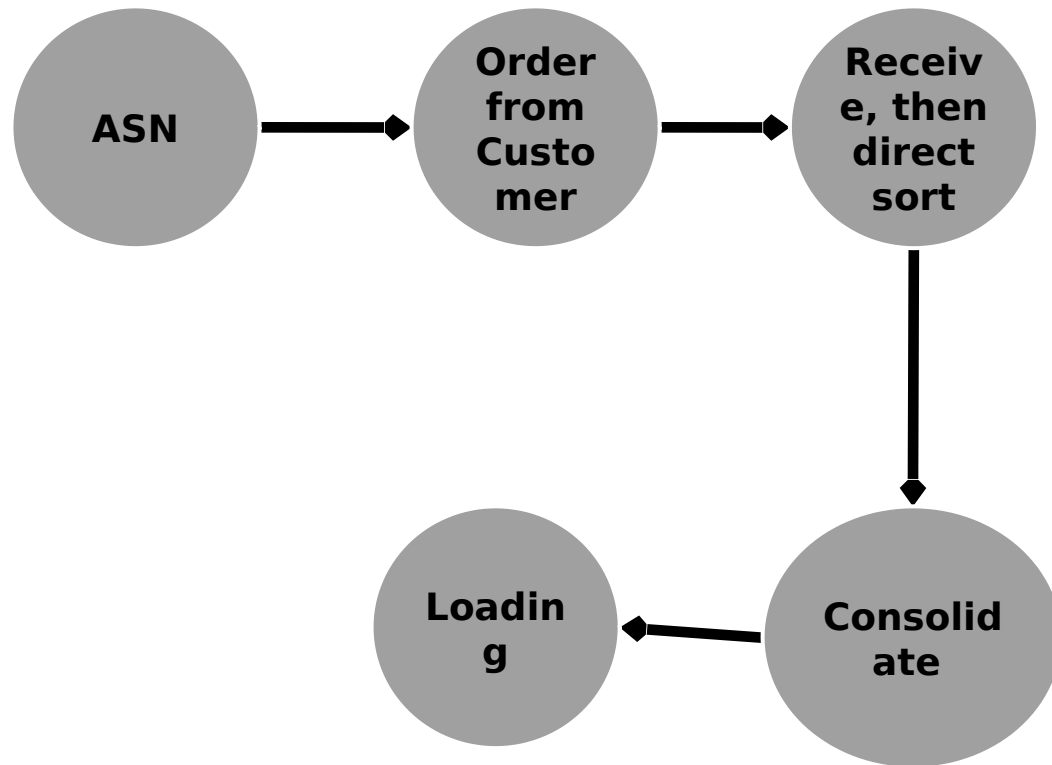
PACKING AND CHECKING

Job Mode	OrderNO	Consignee Name	
Standard Job Mode	SO000001	MF1 Trasnsition Room 1	Reset
New CartonNO			
SO000001#007		Change C...	Clear
Case Size 3			
Lock Cart...		Total QTY	Checked Q...
		37	0
		Uncheck Q...	Current Pa...
		37	20
SKU	SKU Descr(L)	Pack Flag	Allocation QTY
MF1-SKU-012	MF1-SKU-012-Descr1	N	12
MF1-SKU-013	MF1-SKU-013-Descr1	N	17
MF1-SKU-019	MF1-SKU-019-Descr1	N	8
Uncheck QTY			
0			
SKU	SKU Descr(L)	QTY	Allocation Deta...
MF1-SKU-019	MF1-SKU-019-Descr1	8	0000003
MF1-SKU-012	MF1-SKU-012-Descr1	12	0000001
SKU	QTY	SKU Descr(L)	
MF1-SKU-013	17	MF1-SKU-013-Descr1	
LOTNUM	UOM		
0000178	EA		
LOTATT			
Receiving Date	Cust. SKU	PO#	Batch Lot
2019-01-06			
Damage			

HoneywellWMS		Packing List						
Packing List #:				Consignee ID: MF1_TRS01 Consignee Name: MF1 Trasnsition Room 1 Address: Contact: Telephone:				
SO000001								
SN	Order No	Case No	SKU	Description	Qty	UOM	Cubic	Weight
1	SO000001	SO000001#007		MF1-SKU-012-Descr1	12	EA	0.0824	8.64
2	SO000001	SO000001#007		MF1-SKU-013-Descr1	17	EA	0.068	11.05
3	SO000001	SO000001#007		MF1-SKU-019-Descr1	8	EA	0.0133	4.08

- Checking & Packing at the same time to improve work efficiency
- Support capturing Serial No during checking instead of picking to reduce picking time and inconvenience
- Flexible checking by different UOMs
- Print Packing Label and List after checking

APPLICATION OF CROSSDOCK IN NEW ITEM DELIVERY



MULTIPLE ITEM ORDER : PICK AND SORT METHOD

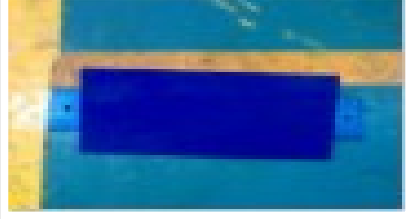


Cart Loc	Picked Qty
# 01	2
# 05	1
# 08	2
# 12	1
# 20	1

CONSTRUCTION OF LOGISTICS CENTER OPERATION BASED ON BARCODE



Location



Flat storage



- Subdivide the storage location and reduce the storage unit
- Unique ID in barcode form in warehouse setup eg: location ID, pallet ID, container ID and etc.
- SKU is tied to those container/pallet.
- Multilevel trace ID tracking



WHAT DOES WMS SOLVE?

Stock Accuracy

- Improve inventory accuracy
- Inventory dynamic analysis □
 - Stock aging
 - Location usage
 - Storage capacity calculation and early notification
- Consistency
- Lean

Efficiency & Accuracy

- Picking efficiency and accuracy.
- Return zoning and diversion to improve return efficiency.
- WMS integrates hardware equipment and Kanban to improve operation efficiency and accuracy.

KPI

- WMS directs task and reduces reliance on human experience and judgment.
- Accurate KPI data

Integrated Supply Chain

- Connect the purchasing end and the selling end.
- Accurate inventory information.
- Reduce order fulfillment time.

SCALABILITY FOR CHANGING REQUESTS

The image displays a software development interface for creating a mobile application. It is divided into three main sections:

- Left Panel (Properties):** Contains fields for ID (0001), Name (RF DEMO), Status (In Use), M-Desc (Input Module desc), and a list of widgets including Texts and Widgets.
- Center Panel (Design View):** Shows a mobile app mockup with a header (Last, Add New Page1/2, Next), a text input field (SKU) containing 'Abc123', a text label (SKU Description) containing 'Abc123', an image placeholder, and a button labeled 'Button'.
- Right Panel (Logic View):** Contains a configuration table for widgets and their logic.

Field	Query	Http	Hide	LOTATT	Skip	Other	Help
Widget No	txt1584954060977_line_15	Text	---	---	---	---	---
Widget Id	SKU	SKU	---	---	---	---	---
Widget Type	Text	Text	---	---	---	---	---
Widget Name	SKU	SKU	---	---	---	---	---
Assistbutton(Just Text)	---	---	---	---	---	---	---
SFC-Hidden	No	No	---	---	---	---	---
Checkbox(Just Text)	---	---	---	---	---	---	---
Widget Logic	Logic+	Http+	Analyze+	Save	Desc By String		
Logic-1							
AND	TRUE	=	Input If-condition	---	+	-	
Action	TriggerAction	Button[BUT1]	Echo	Please Input SKU	---		
SetValue	+						
Logic-2							
AND	TRUE	=	Input If-condition	---	+	-	
Action	---	---	Echo	Input Message	Http-3		
SetValue	+						
SET	SKU Description[	=	---	OR Input SetValue-Info	+	-	
SET	Image[IMG]	=	---	OR Input SetValue-Info	+	-	
Http-3							
Query	取消静音	Query SKU	TO	Page			

THANKS